

TABLE 54.01–5(b)—PRESSURE VESSEL CLASSIFICATION—Continued

[Note to table 54.01–5(b): All classes of pressure vessels are subject to shop inspection and plan approval.<sup>4</sup>]

Class	Service contents	Class limits on pressure and temperature	Joint requirements <sup>1 6 7</sup>	Radiography requirements, section VIII of the ASME Boiler and Pressure Vessel Code (incorporated by reference, see 46 CFR 54.01–1) <sup>3 7</sup>	Post-weld heat treatment requirements <sup>5 7</sup>
II–L Low Temperature.	(a) Vapor or gas, or liquid. (b) Hazardous Materials <sup>2</sup> .	0 through 250 p.s.i. and service temp. below 0 °F.	(1) For category A; (1) or (2) for category B. All categories C and D must have full-penetration welds extending through the entire thickness of the vessel wall or nozzle wall.	Spot. The exemption of UW–11(c) of section VIII of the ASME Boiler and Pressure Vessel Code does not apply.	Same as for I–L except that mechanical stress relief may be substituted if allowed under subpart 54.30 of this chapter.
III .....	(a) Vapor or gas ... (b) Liquid ..... (c) Hazardous Materials <sup>2 3 6</sup> .	Vapor or gas: Under 30 p.s.i. and 0 through 275 °F. Liquid: Under 200 p.s.i. and 0 through 250 °F.	In accordance with section VIII of the ASME Boiler and Pressure Vessel Code.	Spot, unless exempted by UW–11(c) of section VIII of the ASME Boiler and Pressure Vessel Code.	In accordance with section VIII of the ASME Boiler and Pressure Vessel Code.

<sup>1</sup>Welded joint categories are defined under UW–3 of section VIII of the ASME Boiler and Pressure Vessel Code. Joint types are described in table UW–12 of section VIII of the ASME Boiler and Pressure Vessel Code, and numbered (1), (2), etc.

<sup>2</sup>See 46 CFR 54.20–2.

<sup>3</sup>See 46 CFR 54.25–8(c) and 54.25–10(d).

<sup>4</sup>See 46 CFR 54.01–15 and 54.10–3 for exemptions.

<sup>5</sup>Specific requirements modifying table UCS–56 of section VIII of the ASME Boiler and Pressure Vessel Code appear in 46 CFR 54.25–7.

<sup>6</sup>See 46 CFR 54.20–3(c) and (f).

<sup>7</sup>Applies only to welded pressure vessels.

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[CGFR 68–82, 33 FR 18828, Dec. 18, 1968, as amended by CGFR 69–127, 35 FR 9976, June 17, 1970; CGD 77–147, 47 FR 21809, May 20, 1982; 55 FR 696, Jan. 8, 1990; CGD 88–057, 55 FR 24236, June 15, 1990; CGD 85–061, 55 FR 41917, Oct. 16, 1990; CGD 95–027, 61 FR 26000, May 23, 1996; USCG–2000–7790, 65 FR 58460, Sept. 29, 2000; USCG–2003–16630, 73 FR 65165, Oct. 31, 2008]

#### § 54.01–10 Steam-generating pressure vessels (modifies U–1(g)).

(a) Pressure vessels in which steam is generated are classed as “Unfired Steam Boilers” except as required otherwise by paragraph (b) of this section. Unfired steam boilers must be fitted with an efficient water level indicator, a pressure gage, a blowdown valve, and an approved safety valve as required by § 54.15–15. Unfired steam boilers must be constructed in accordance with this part other than when the pressures are more than 206 kPa (30 psig) or the temperatures of the working fluid are more than 454 °C (850 °F) when such boilers must be constructed in accordance with part 52 of this subchapter.

(b) Vessels known as “Evaporators” or “Heat Exchangers” are not classified as unfired steam boilers. They

shall be fitted with an approved safety device as required under § 54.15–15 and constructed in accordance with this part.

(c) An evaporator in which steam is generated shall be fitted with an efficient water level indicator, a pressure gage, and a blowdown valve.

[CGFR 68–82, 33 FR 18828, Dec. 18, 1968, as amended by CGD 81–79, 50 FR 9436, Mar. 8, 1985; CGD 95–012, 60 FR 48044, Sept. 18, 1995; USCG–2003–16630, 73 FR 65166, Oct. 31, 2008]

#### § 54.01–15 Exemptions from shop inspection and plan approval (modifies U–1(c)(2)).

(a) The following classifications are exempt from shop inspection and plan approval requirements of this part:

(1) Vessels containing water at a pressure not greater than 689 kPa (100